RECEIVED

APR 2 3 2003



1600

RAW SEQUENCE LISTING DATE: 04/18/2003 PATENT APPLICATION: US/08/813,323C TIME: 14:26:36

```
1 <110> APPLICANT: Baltimore, David
 2
        Cheng, Genhong
 3
         Ye, Zheng-Sheng
         Lederman, Seth
 5
         Cleary, Aileen
 6 <120> TITLE OF INVENTION: Truncated Craf-1 Inhibits CD40 Signalling
 7 <130> FILE REFERENCE: 0575/50659
 8 <140> CURRENT APPLICATION NUMBER: US/08/813,323C
 9 <141> CURRENT FILING DATE: 1997-03-10
                                                        ENTERED
10 <160> NUMBER OF SEQ ID NOS: 11
11 <170> SOFTWARE: PatentIn version 3.1
13 <210> SEQ ID NO: 1
14 <211> LENGTH: 567
15 <212> TYPE: PRT
16 <213> ORGANISM: Mouse Sp.
17 <400> SEQUENCE: 1
         Met Glu Ser Ser Lys Lys Met Asp Ala Ala Gly Thr Leu Gln Pro Asn
19
20
         Pro Pro Leu Lys Leu Gln Pro Asp Arg Gly Ala Gly Ser Val Leu Val
21
         Pro Glu Gln Gly Gly Tyr Lys Glu Lys Phe Val Lys Thr Val Glu Asp
22
23
                                     40
24
         Lys Tyr Lys Cys Glu Lys Cys Arg Leu Val Leu Cys Asn Pro Lys Gln
25
                                 55
                                                      60
26
         Thr Glu Cys Gly His Arg Phe Cys Glu Ser Cys Met Ala Ala Leu Leu
                             70
                                                  75
27
         Ser Ser Ser Pro Lys Cys Thr Ala Cys Gln Glu Ser Ile Ile Lys
28
29
30
         Asp Lys Val Phe Lys Asp Asn Cys Cys Lys Arg Glu Ile Leu Ala Leu
31
                                                              110
                                         105
         Gln Val Tyr Cys Arg Asn Glu Gly Arg Gly Cys Ala Glu Gln Leu Thr
32
33
                                     120
                                                          125
                 115
         Leu Gly His Leu Leu Val His Leu Lys Asn Glu Cys Gln Phe Glu Glu
34
35
                                 135
         Leu Pro Cys Leu Arg Ala Asp Cys Lys Glu Lys Val Leu Arg Lys Asp
36
                             150
                                                 155
37
38
         Leu Arg Asp His Val Glu Lys Ala Cys Lys Tyr Arg Glu Ala Thr Cys
39
                         165
                                             170
40
         Ser His Cys Lys Ser Gln Val Pro Met Ile Lys Leu Gln Lys His Glu
41
                     180
         Asp Thr Asp Cys Pro Cys Val Val Val Ser Cys Pro His Lys Cys Ser
42
43
                                     200
         Val Gln Thr Leu Leu Arg Ser Glu Leu Ser Ala His Leu Ser Glu Cys
```

RAW SEQUENCE LISTING

NG DATE: 04/18/2003 : US/08/813,323C TIME: 14:26:36

PATENT APPLICATION: US/08/813,323C TIME

| 4.5 | | | 010 | | | | | 015 | | | | | 220 | | | | |
|-----|-------|-----------|-------|-------------|-----------|------------|-------|--------|----------|--------|------------|----------|------|--------|------------|--------------|-------|
| 45 | | | 210 | 7. 1 | _ | _ | m1 | 215 | . | D1 | . | . | 220 | 61. | <u> </u> | 77 - 7 | D1: - |
| 46 | | | Asn | Ата | Pro | Ser | | Cys | Ser | Pne | ьys | | Tyr | GTÀ | Cys | vaı | Phe |
| 47 | | 225 | | | _ | ~ 1 | 230 | - 1 | _ | | | 235 | | _ | _ | 7 . 7 | 240 |
| 48 | | GIn | GLy | Thr | Asn | | GIn | lle | гàг | Ala | His | GLu | Ala | Ser | Ser | | Val |
| 49 | | | | | | 245 | _ | _ | | _ | 250 | _ | _ | _ | | 255 | |
| 50 | | Gln | His | Val | | Leu | Leu | Lys | Glu | | Ser | Asn | Ser | Leu | | Lys | Lys |
| 51 | | | | | 260 | | | | | 265 | | | | | 270 | | |
| 52 | | Val | Ser | Leu | Leu | Gln | Asn | Glu | Ser | Val | Glu | Lys | Asn | _ | Ser | Ile | Gln |
| 53 | | | | 275 | | | | | 280 | | | | | 285 | | | |
| 54 | | Ser | Leu | His | Asn | Gln | Ile | Cys | Ser | Phe | Glu | Ile | Glu | Ile | Glu | Arg | Gln |
| 55 | | | 290 | | | | | 295 | | | | | 300 | | | | |
| 56 | | Lys | Glu | Met | Leu | Arg | | Asn | Glu | Ser | Lys | Ile | Leu | His | Leu | Gln | Arg |
| 57 | | 305 | | | | | 310 | | | | | 315 | | | | | 320 |
| 58 | | Val | Ile | Asp | Ser | Gln | Ala | Glu | Lys | Leu | Lys | Glu | Leu | Asp | Lys | Glu | Ile |
| 59 | | | | | | 325 | | | | | 330 | | | | | 335 | |
| 60 | | Arg | Pro | Phe | Arg | Gln | Asn | Trp | Glu | Glu | Ala | Asp | Ser | Met | Lys | Ser | Ser |
| 61 | | , | | | 340 | | | - | | 345 | | _ | | | 350 | | |
| 62 | | Val | Glu | Ser | Leu | Gln | Asn | Arq | Val | Thr | Glu | Leu | Glu | Ser | Val | Asp | Lys |
| 63 | | | | 355 | | | | • | 360 | | | | | 365 | | • | - |
| 64 | | Ser | Ala | | Gln | Ala | Ala | Ara | Asn | Thr | Gly | Leu | Leu | Glu | Ser | Gln | Leu |
| 65 | | | 370 | 1 | | | | 375 | | | 1 | | 380 | | | | |
| 66 | | Ser | | His | Asp | Gln | Thr | | Ser | Val | His | Asp | | Ara | Leu | Ala | Asp |
| 67 | | 385 | 5 | | 110 P | V | 390 | | | | | 395 | | 9 | | | 400 |
| 68 | | | Asp | Len | Ara | Phe | | Val | Leu | Glu | Thr | | Ser | Tur | Asn | Glv | |
| 69 | | 1100 | 1101 | шеш | 9 | 405 | 01 | | 200 | 014 | 410 | 1124 | 551 | - 1 - | | 415 | |
| 70 | | T.211 | T۱۵ | Trn | Lus | | Ara | Asn | ጥህr | Lvs | Arg | Ara | Lvs | Gln | Glu | | Val |
| 71 | | пси | 110 | 111 | 420 | 110 | 1119 | 715P | - y - | 425 | 1119 | 1119 | цуо | 0.1.1. | 430 | 1114 | · u = |
| 72 | | Mot | Clv | Tvc | | Lou | Sor | Lou | ጥኒኒዮ | | Gln | Dro | Pho | Тиг | | Glv | ጥህዮ |
| 73 | | Met | Gry | 435 | 1111 | ьец | 261 | цец | 440 | Ser | GIII | 110 | THE | 445 | 1111 | Сту | ı yı |
| 74 | | Dho | C1., | | Tvc | Mot | Cvic | Nlα | | Wa 1 | Tyr | Tou | Λen | | Aen | C1 v | Mot |
| 75 | | rne | 450 | тАт | гу | met | Cys | 455 | ALG | vaı | тут | пец | 460 | сту | тэр | σту | Hec |
| 76 | | C1., | | C1,, | Thr | шіс | T 011 | | T 011 | Dho | Phe | 1723 | | Mot | Λrα | C1 17 | Glu |
| 77 | | 465 | гур | СТУ | 1111 | птэ | 470 | Ser | цец | rne | rne | 475 | 116 | Met | лгу | СТУ | 480 |
| 78 | | | 7 cn | 7/1 ~ | LOU | T O11 | | Trn | Dro | Dho | Lys | | Tuc | Wal | Thr | Lou | |
| 79 | | туг | Asp | ніа | ьеu | 485 | FIO | пр | FIO | rne | 490 | GIII | цуз | vaı | 1111 | 495 | Mec |
| | | T 011 | Mo+ | 7 00 | C1 = | | Cox | C0.20 | 71 ~~ ~~ | 7~~ | | T 011 | C1,, | 7 00 | 71. | | Two |
| 80 | | Leu | Met | ASP | 500 | σту | ser | ser | Arg | 505 | His | ьеи | GTÄ | ASP | 510 | rne | гу |
| 81 | | D | 7\ | D | | C | C | C = 10 | Dha | | T | Dwa | mh ~ | C1 | | Mot | 7.05 |
| 82 | | PIO | ASP | | ASII | ser | ser | ser | | ьуѕ | Lys | PIO | TIIT | _ | GIU | Met | ASII |
| 83 | | -1 | 7.7 - | 515 | 01 | ~ | D | 77 - 7 | 520 | ** - 1 | 70.1 - | C1 | m) | 525 | T | C1 | 7 |
| 84 | | тте | | Ser | СТУ | cys | Pro | | rne | vai | Ala | GIII | | val | ьeu | GIU | ASII |
| 85 | | | 530 | _ | - 1 | _ | _ | 535 | m1 | ~ · | D 1 | - 1 | 540 | | ~ 1 | | - |
| 86 | | - | Thr | Tyr | ITe | гàг | _ | Asp | Thr | TTE | Phe | | ьуs | vaı | тте | vaı | _ |
| 87 | | 545 | _ | _ | _ | _ | 550 | _ | | | | 555 | | | | | 560 |
| 88 | | Thr | Ser | Asp | Leu | | Asp | Pro | | | | | | | | | |
| 89 | | | | | | 565 | | | | | | | | | | | |
| | <210> | | | | 2 | | | | | | | | | | | | |
| | <211> | | | | | | | | | | | | | | | | |
| | <212> | | | | | | | | | | | | | | | | |
| 94 | <213> | ORGA | NISN | 1: Ho | omo S | Sapie | ens | | | | | | | | | | |

RAW SEQUENCE LISTING

PATENT APPLICATION: US/08/813,323C TIME: 14:26:36

DATE: 04/18/2003

| 95 <400> | | | | | | | | | | | | | | | | |
|------------|--------|-------|-------------|------|------|-------|-----------|-----------|----------|--------------|--------|-------------|----------------|------|--------|-------|
| 96 | | Glu | Ser | Ser | Lys | Lys | Met | Asp | Ser | | Gly | Ala | Leu | Gln | | Asn |
| 97 | 1 | D | . | T | 5 | 112 - | m1 | 70 | 7 | 10 | 70.7 - | C1 | шь | D | 15 | Dh. |
| 98 | Pro | Pro . | | _ | Leu | Hls | Thr | Asp | Arg | Ser | Ата | СТА | Tnr | | vaı | Pne |
| 99 100 | 17.5 | Dro | | 20 | C1 | C1 | Ф | T | 25 | Tvc | Dho | . 17-1 | T 110 | 30 | . 17-1 | Clu |
| 100 | vai | PIO | 35 | GTII | GTÀ | GTĀ | тÀт | ьуs 40 | GIU | гуу | PILE | : val | . цуз 45 | 1111 | Val | Glu |
| 101 102 | 7 en | Tuc | | Tuc | Cvc | Glu | Tuc | | Hic | Lau | . Val | Len | | Sar | Dro | Lys |
| 102 | Азр | БуS | тут | пуз | Cys | Giu | ьуз 55 | Cys | 1112 | пес | ı vaı | . 160 60 | c Cys | 261 | 110 | , пуз |
| 103 | Gln | | Glu | Cve | G1 v | ніс | | Pho | Cve | Glu | Ser | | . Mot | Δla | Δla | Leu |
| 105 | 65 | 1111 | Olu | Cys | OLY | 70 | 1119 | 1110 | . Cys | 010 | 75 | . Oyo | , 1100 | 1110 | | 80 |
| 106 | | Ser | Ser | Ser | Ser | | Lvs | Cvs | Thr | Ala | _ | Gln | Glu | Ser | Tle | Val |
| 107 | 100 | 001 | 001 | 001 | 85 | 2.20 | 270 | 010 | | 90 | . 0,2 | | . 0 | | 95 | |
| 108 | Lvs | Asp | Lvs | Val | | Lvs | Asp | Asn | Cvs | | Lvs | Aro | r Glu | Ile | | Ala |
| 109 | -10 | | -1- | 100 | | -1- | | | 105 | _ | | | , | 110 | | |
| 110 | Leu | Gln | Ile | | | Ara | Asn | Glu | Ser | Aro | Gly | . Cvs | Ala | Glu | Gln | Leu |
| 111 | - | - | 115 | - | _ | , | | 120 | | - | | _ | 125 | | | |
| 112 | Thr | Leu | Gly | His | Leu | Leu | Val | His | Leu | Lys | Asn | Asp | Cys | His | Phe | Glu |
| 113 | | 130 | - | | | | 135 | | | - | | 140 | _ | | | |
| 114 | Glu | Leu | Pro | Cys | Val | Arg | Pro | Asp | Cys | Lys | Glu | Lys | : Val | Leu | Arg | Lys |
| 115 | 145 | | | _ | | 150 | | | | | 155 | j | | | | 160 |
| 116 | Asp | Leu | Arg | Asp | His | Val | Glu | Lys | Ala | Cys | Lys | Tyr | Arg | Glu | Ala | Thr |
| 117 | | | | | 165 | | | | | 170 | 1 | | | | 175 | |
| 118 | Cys | Ser | His | Cys | Lys | Ser | Gln | Val | Pro | Met | Ile | : Ala | Leu | Gln | Lys | His |
| 119 | | | | 180 | | | | | 185 | | | | | 190 | | |
| 120 | Glu | Asp | Thr | Asp | Cys | Pro | Cys | Val | Val | Val | . Ser | Cys | Pro | Ḥis | Lys | Cys |
| 121 | | | 195 | | | | | 200 | | | | | 205 | | | |
| 122 | Ser | | Gln | Thr | Leu | Leu | _ | | Glu | Leu | Ser | | | Leu | Ser | Glu |
| 123 | | 210 | | _ | | | 215 | | | | _ | 220 | | | _ | |
| 124 | _ | | Asn | Ala | Pro | | | Cys | Ser | Phe | | _ | Tyr | Gly | Cys | Val |
| 125 | 225 | | ~ 1 | m) | | 230 | | ~ 1 | . | 7. 7. | 235 | | 7 . 1 - | 0 | | 240 |
| 126 | Phe | Gin | GTÀ | Thr | | GIN | GIn | тте | Lys | | | Glu | ı Ala | Ser | | |
| 127 | 17.0 1 | C1 m | 1114.0 | 1701 | 245 | Τ | Ton | T | C1., | 250 | | . 7.00 | Cox | Tou | 255 | |
| 128 129 | Val | GIII | HIS | 260 | ASII | ьeu | ьеu | гуу | 265 | _ | , ser | ASII | ser | 270 | | Lys |
| 130 | Tuc | Val | Sor | | Lou | Gln | Aen | Glu | | | G1: | Luc | Aen | | | Ile |
| 131 | пуз | vaı | 275 | шец | пец | GIII | Mon | 280 | | Val | . Git | . пуз | 285 | | 561 | 110 |
| 132 | Gln | Ser | | His | Asn | Gln | Tle | | | Phe | Glu | Tle | | | Glu | Arg |
| 133 | 0211 | 290 | D Cu | | | 02.11 | 295 | - | | | 010 | 300 | | | | 9 |
| 134 | Gln | | Glu | Met | Leu | Ara | | | Glu | Ser | Lvs | | | His | Leu | Gln |
| 135 | 305 | | | | | 310 | | | | | 315 | | | | | 320 |
| 136 | | | Ile | Asp | Ser | Gln | Ala | Glu | Lys | Leu | Lys | Glu | Leu | Asp | Lys | Glu |
| 137 | _ | | | - | 325 | | | | - | 330 | | | | - | 335 | |
| 138 | Ile | Arg | Pro | Phe | Arg | Gln | Asn | Trp | Glu | Glu | Ala | Asp | Ser | Met | Lys | Ser |
| 139 | | - | | 340 | | | | | 345 | | | | | 350 | | |
| 140 | Ser | Val | Glu | Ser | Leu | Gln | Asn | Arg | Val | Thr | Glu | Leu | Glu | Ser | Val | Asp |
| 141 | | | 355 | | | | | 360 | | | | | 365 | | | |
| 142 | Lys | Ser | Ala | Gly | Gln | Val | Ala | Arg | Asn | Thr | Gly | Leu | Leu | Glu | Ser | Gln |
| 143 | | 370 | | | | | 375 | | | | | 380 | | | | |

RAW SEQUENCE LISTING DATE: 04/18/2003 PATENT APPLICATION: US/08/813,323C TIME: 14:26:36

```
Leu Ser Arg His Asp Gln Met Leu Ser Val His Asp Ile Arg Leu Ala
144
145
                               390
                                                   395
146
          Asp Met Asp Leu Arg Phe Gln Val Leu Glu Thr Ala Ser Tyr Asn Gly
147
                                               410
                           405
                                                                    415
148
          Val Leu Ile Trp Lys Ile Arg Asp Tyr Lys Arg Arg Lys Gln Glu Ala
149
                      420
                                           425
                                                                430
150
          Val Met Gly Lys Thr Leu Ser Leu Tyr Ser Gln Pro Phe Tyr Thr Gly
151
                                       440
152
          Tyr Phe Gly Tyr Lys Met Cys Ala Arg Val Tyr Leu Asn Gly Asp Gly
153
                                   455
154
          Met Gly Lys Gly Thr His Leu Ser Leu Phe Phe Val Ile Met Arg Gly
155
          465
                               470
                                                    475
          Glu Tyr Asp Ala Leu Leu Pro Trp Pro Phe Lys Gln Lys Val Thr Leu
156
157
                                               490
          Met Leu Met Asp Gln Gly Ser Ser Arg Arg His Leu Gly Asp Ala Phe
158
159
                                           505
                                                                510
                      500
          Lys Pro Asp Pro Asn Ser Ser Phe Lys Lys Pro Thr Gly Glu Met
160
161
                                       520
          Asn Ile Ala Ser Gly Cys Pro Val Phe Val Ala Gln Thr Val Leu Glu
162
163
                                   535
                                                        540
164
          Asn Gly Thr Tyr Ile Lys Asp Asp Thr Ile Phe Ile Lys Val Ile Val
165
                               550
                                                   555
166
          Asp Thr Ser Asp Leu Pro Asp Pro
                           565
167
169 <210> SEO ID NO: 3
170 <211> LENGTH: 2359
171 <212> TYPE: DNA
172 <213> ORGANISM: Mouse Sp.
173 <400> SEQUENCE: 3
                                                                                   60
174
          ggcggcggag gatgcgcgcg gcgcctgagc cggccgaacg ggcggcctcg gggtacaggg
                                                                                  120
175
          tececattae ttgaaggata aggetggeae ggeteegaeg tetgtgtgga agetteteee
176
                                                                                  180
          tecettetga gettetetag aeteettaca gegeaeggea cagaatttea gttteetaag
                                                                                  240
177
          atggagtcaa gcaaaaagat ggatgctgct ggcacactgc agcctaaccc acccctaaag
                                                                                  300
178
          ctgcagcctg atcgcggcgc agggtccgtg ctcgtgccgg agcaaggagg ctacaaggag
                                                                                  360
179
          aagtttqtga agacggtgga agacaagtac aagtgcgaga agtgccgcct ggtgctgtgc
                                                                                  420
180
          aacccqaaqc agacqgaqtg tggccaccgg ttctgcgaga gctgcatggc cgccctgctg
                                                                                  480
181
          agctcctcca gtccaaaatg cacagcgtgc caagaaagca tcatcaaaga caaggtgttt
                                                                                  540
182
          aaqqataatt qctqcaaqaq aqaqattctq qcccttcaqq tctactqtcq qaatqaagqc
          agaggttgtg cggagcagct gactctggga catctgctgg tgcacctaaa aaatgaatgt
183
                                                                                  600
          cagtttgagg aacttccctg tctgcgtgcc gactgcaaag aaaaagtact gagaaaaqac
184
                                                                                  660
                                                                                 720
185
          ttgcgggatc acgtggaaaa ggcctgtaaa taccgcgagg ccacgtgcag tcactgcaag
                                                                                 780
186
          agccaagtgc ccatgatcaa actgcagaaa catgaagaca cagattgtcc ctgtgtggtg
                                                                                  840
187
          gtatcctgcc ctcacaagtg cagcgttcag actcttctaa ggagtgagtt gagtgcacac
                                                                                  900
188
          ttgtccgagt gtgtcaatgc ccccagcacc tgtagtttta agcgctatgg ctgcgttttt
189
          caqqqtacaa accaqcaqat caaqqcccat qaggccaqct ccqcggtaca gcacgtgaac
                                                                                  960
190
          ctgctgaagg agtggagcaa ctccctggag aagaaggttt ccctgctgca gaatgaaagt
                                                                                1020
191
                                                                                1080
          qttgagaaaa acaagagcat ccaaagcctg cacaaccaga tctgcagctt tgagatcgag
          attgagaggc agaaggagat gctccgaaac aacgagtcca agatccttca cctgcagcgg
                                                                                1140
192
                                                                                1200
193
          qtaatcqaca qccaaqcaqa qaaactqaaa qaactqqaca aqqagatccg tcccttccgg
```

DATE: 04/18/2003

RAW SEQUENCE LISTING

PATENT APPLICATION: US/08/813,323C TIME: 14:26:36

| 194 | | cagaactggg | aggaagcgga | cagcatgaag | agcagtgtgg | agtccctcca | gaaccgagtg | 1260 |
|--|-----|--|---|---|--|---|--|---|
| 195 | | actgagctgg | agagcgtaga | caaaagtgcg | gggcaggcgg | ctcgcaacac | aggcttgctg | 1320 |
| 196 | | gagtcccagc | tgagccggca | tgaccagacg | ttgagtgttc | atgacatccg | cttggccgac | 1380 |
| 197 | | atggacctgc | ggttccaggt | cctcgagacc | gccagctaca | acggggtgct | gatctggaag | 1440 |
| 198 | | atccgtgact | acaagcgccg | gaagcaggag | gccgtcatgg | ggaagaccct | gtctctctac | 1500 |
| 199 | | | tctacacagg | | | | | 1560 |
| 200 | | | tggggaaagg | | | | | 1620 |
| 201 | | | tgttgccatg | | | | | 1680 |
| 202 | | | gccgtcatct | | | | | 1740 |
| 203 | | | ccggagagat | | | | | 1800 |
| 204 | | | acgggacgta | | | | | 1860 |
| 205 | | | tgcctgaccc | | | | | 1920 |
| 206 | | | gggtgagcta | | | | | 1980 |
| 207 | | | aagcagccgg | | | | | 2040 |
| 208 | | | gaccccaacg | | | | | 2100 |
| | | | | | | | | 2160 |
| 209 | | | aacaagataa | | | | | 2220 |
| 210 | | | aaggtgggaa | | | | | |
| 211 | | | aaagagaaca | | | | | 2280 |
| 212 | | | aaacaatcac | atactcatcc | taaaattcag | ggtgcaactc | cgtttcaaat | 2340 |
| 213 | | attgtatatt | | | | | | 2359 |
| | | SEQ ID NO: | | | | | | |
| | | LENGTH: 245 | 55 | | | | | |
| | _ | TYPE: DNA | | | | | | |
| | .3> | ORGANISM: H | Homo Sapiens | 3 | | | | |
| | | | | | | | | |
| | | SEQUENCE: 4 | 1 | | | | | |
| 220 | | SEQUENCE: 4 | 1 cggcgcggcc | gccgcgtgcg | | | | 60 |
| 220 221 | | SEQUENCE: 4 | 1 | gccgcgtgcg | | | | 120 |
| 220 221 222 | | SEQUENCE: 4 cgggggagcg tccagccggc | 1 cggcgcggcc | gccgcgtgcg gcggtcgtcg | gctcttcccc | gccccccgtc | atggggcagc | 120 180 |
| 220 221 | | SEQUENCE: 4 cgggggagcg tccagccggc ccggggagca | f cggcgcggcc ggcagccgcg | gccgcgtgcg gcggtcgtcg gaccgcggcg | gctcttcccc gaggacgcgc | gccccccgtc ccggcgcccc | atggggcagc tgagccggcc | 120 180 240 |
| 220 221 222 | | SEQUENCE: 4 cgggggagcg tccagccggc ccggggagca gagcggcgac | 1 cggcgcggcc ggcagccgcg gaacgctgcg ggaccgcgag | gccgcgtgcg gcggtcgtcg gaccgcggcg aactcctctt | gctcttcccc gaggacgcgc tcctaaaatg | gcccccgtc ccggcgcccc gagtcgagta | atggggcagc tgagccggcc aaaagatgga | 120 180 |
| 220 221 222 223 | | SEQUENCE: design consiste consiste constant cons | f cggcgcggcc ggcagccgcg gaacgctgcg | gccgcgtgcg gcggtcgtcg gaccgcggcg aactcctctt ctaacccgcc | gctcttcccc gaggacgcgc tcctaaaatg gctaaagctg | gcccccgtc ccggcgcccc gagtcgagta cacactgacc | atggggcagc tgagccggcc aaaagatgga gtagtgctgg | 120 180 240 |
| 220 221 222 223 224 | | SEQUENCE: design consiste cons | ggcagcggcc ggcagccgcg gaacgctgcg ggaccgcgag gcgctgcaga tttgtccctg | gccgcgtgcg gcggtcgtcg gaccgcggcg aactcctctt ctaacccgcc aacaaggagg | gctcttcccc gaggacgcgc tcctaaaatg gctaaagctg ttacaaggaa | gcccccgtc ccggcgccc gagtcgagta cacactgacc aagtttgtga | atggggcagc tgagccggcc aaaagatgga gtagtgctgg agaccgtgga | 120 180 240 300 |
| 220 221 222 223 224 225 | | SEQUENCE: deggggageg tecageegge eegggagea gageeggegae eteteetgge gaegeeagtt ggaeaagtae | eggegegee ggeageegeg gaacgetgeg ggacegegag gegetgeaga tttgteeetg aagtgtgaga | gccgcgtgcg gcggtcgtcg gaccgcggcg aactcctctt ctaacccgcc aacaaggagg agtgccacct | gctcttcccc gaggacgcgc tcctaaaatg gctaaagctg ttacaaggaa ggtgctgtgc | gcccccgtc ccggcgccc gagtcgagta cacactgacc aagtttgtga agcccgaagc | atggggcagc tgagccggcc aaaagatgga gtagtgctgg agaccgtgga agaccgagtg | 120 180 240 300 360 |
| 220 221 222 223 224 225 226 | | SEQUENCE: cgggggagcg tccagccggcaccagggagcacctctcctggcgaccagttggacaagtactgggcaccgc | eggegegee ggeageegeg gaacgetgeg ggacegegag gegetgeaga tttgteeetg aagtgtgaga ttetgegaga | gccgcgtgcg gcggtcgtcg gaccgcggcg aactcctctt ctaacccgcc aacaaggagg agtgccacct gctgcatggc | gctcttcccc gaggacgcgc tcctaaaatg gctaaagctg ttacaaggaa ggtgctgtgc ggccctgctg | gcccccgtc ccggcgccc gagtcgagta cacactgacc aagtttgtga agcccgaagc agctcttcaa | atggggcagc tgagccggcc aaaagatgga gtagtgctgg agaccgtgga agaccgagtg gtccaaaatg | 120 180 240 300 360 420 |
| 220 221 222 223 224 225 226 227 | | SEQUENCE: cgggggagcg tccagcgggagca gagcggcgac ctctcctggc gacgccagtt ggacaagtac tgggcaccgc tacagcgtgt | eggegegee ggeageegeg gaacgetgeg ggaeegegag gegetgeaga tttgteeetg aagtgtgaga ttetgegaga eaagagagea | gccgcgtgcg gcggtcgtcg gaccgcggcg aactcctctt ctaacccgcc aacaaggagg agtgccacct gctgcatggc tcgttaaaga | gctcttcccc gaggacgcgc tcctaaaatg gctaaagctg ttacaaggaa ggtgctgtgc ggccctgctg taaggtgttt | gcccccgtc ccggcgccc gagtcgagta cacactgacc aagtttgtga agcccgaagc agctcttcaa aaggataatt | atggggcagc tgagccggcc aaaagatgga gtagtgctgg agaccgtgga agaccgagtg gtccaaaatg gctgcaagag | 120 180 240 300 360 420 480 |
| 220 221 222 223 224 225 226 227 228 229 | | SEQUENCE: cgggggagcg tccagcggcaca gagcggcgac ctctcctggc gacgccagtt ggacaagtac tgggcaccgc tacagcgtgt agaaattctg | eggegegee ggeageegeg gaacgetgeg ggacegegag gegetgeaga tttgteeetg aagtgtgaga ttetgegaga caagagagea getetteaga | gccgcgtgcg gcggtcgtcg gaccgcggcg aactcctctt ctaacccgcc aacaaggagg agtgccacct gctgcatggc tcgttaaaga tctattgtcg | gctcttcccc gaggacgcgc tcctaaaatg gctaaagctg ttacaaggaa ggtgctgtgc ggccctgctg taaggtgttt gaatgaaagc | gcccccgtc ccggcgccc gagtcgagta cacactgacc aagtttgtga agcccgaagc agctcttcaa aaggataatt agaggttgtg | atggggcagc tgagccggcc aaaagatgga gtagtgctgg agaccgtgga agaccgagtg gtccaaaatg gctgcaagag cagagcagtt | 120 180 240 300 360 420 480 540 |
| 220 221 222 223 224 225 226 227 228 229 230 | | SEQUENCE: cgggggagcg tccagccggc ccggggagca gagcggcac ctctcctggc gacgccagtt ggacaagtac tgggcaccgc tacagcgtgt agaaattctg aacgctggga | cggcgcgcc ggcagccgcg gaacgctgcg ggaccgcgag gcgctgcaga tttgtccctg aagtgtgaga tctgcgaga caagagagca gctcttcaga catctgctgg | gccgcgtgcg gcggtcgtcg gaccgcggcg aactcctctt ctaacccgcc aacaaggagg agtgccacct gctgcatggc tcgttaaaga tctattgtcg | gctcttcccc gaggacgcgc tcctaaaatg gctaaagctg ttacaaggaa ggtgctgtgc ggccctgctg taaggtgttt gaatgaaagc aaatgattgc | gcccccgtc ccggcgccc gagtcgagta cacactgacc aagtttgtga agcccgaagc agctcttcaa aaggataatt agaggttgtg cattttgaag | atggggcagc tgagccggcc aaaagatga gtagtgctgg agaccgtgga agaccgagtg gtccaaaatg gctgcaagag cagagcagtt aacttccatg | 120 180 240 300 360 420 480 540 |
| 220 221 222 223 224 225 226 227 228 229 230 231 | | SEQUENCE: cgggggagcg tccagccggc ccggggagca gagcggcac ctctcctggc gacgccagtt ggacaagtac tgggcaccgc tacagcgtgt agaaattctg aacgctgga tgtgcgtcct | eggcgcgcc ggcagccgcg gaacgctgcg ggaccgcgag gcgctgcaga tttgtccctg aagtgtgaga ttctgcgaga caagagagca gctcttcaga catctgctgg | gccgcgtgcg gcggtcgtcg gaccgcggcg aactcctctt ctaacccgcc aacaaggagg agtgccacct gctgcatggc tcgttaaaga tctattgtcg tgcatttaaa aaaaggtctt | gctcttcccc gaggacgcgc tcctaaaatg gctaaagctg ttacaaggaa ggtgctgtgc ggccctgctg taaggtgttt gaatgaaagc aaatgattgc gaggaaagac | gcccccgtc ccggcgccc gagtcgagta cacactgacc aagtttgtga agcccgaagc agctcttcaa aaggataatt agaggttgtg cattttgaag ctgcgagacc | atggggcagc tgagccggcc aaaagatgga gtagtgctgg agaccgtgga agaccgagtg gtccaaaatg gctgcaagag cagagcagtt aacttccatg acgtggagaa | 120 180 240 300 360 420 480 540 600 660 |
| 220 221 222 223 224 225 226 227 228 229 230 231 232 | | SEQUENCE: cgggggagcg tccagccggcaccagtgaccagttggacaagtactgggcaccgctacagcgtgtagaaattctgacgctggatgtgggtcaaagcgtgtagacgtgtaaa | eggcgcgcc ggcagccgcg gaacgctgcg ggaccgcgag gcgctgcaga tttgtccctg aagtgtgaga ttctgcgaga caagagagca gctcttcaga catctgctgg gactgcaaag taccgggaag | gccgcgtgcg gcggtcgtcg gaccgcggcg aactcctctt ctaacccgcc aacaaggagg agtgccacct gctgcatggc tcgttaaaga tctattgtcg tgcatttaaa aaaaggtctt ccacatgcag | gctcttcccc gaggacgcgc tcctaaaatg gctaaagctg ttacaaggaa ggtgctgtgc ggccctgctg taaggtgttt gaatgaaagc aaatgattgc gaggaaagac ccactgcaag | gcccccgtc ccggcgccc gagtcgagta cacactgacc aagtttgtga agcccgaagc agctcttcaa aaggataatt agaggttgtg cattttgaag ctgcgagacc agtcaggttc | atggggcagc tgagccggcc aaaagatgga gtagtgctgg agaccgtgga agaccgagtg gtccaaaatg gctgcaagag cagagcagtt aacttccatg acgtggagaa cgatgatcgc | 120 180 240 300 360 420 480 540 600 660 720 780 |
| 220 221 222 223 224 225 226 227 228 229 230 231 232 233 | | SEQUENCE: cgggggagcg tccagccggc ccggggagca gagcggcac ctctcctggc gacgccagtt ggacaagtac tgggcaccgc tacagcgtgt agaaattctg aacgctggga tgtgcgtcct ggcgtgtaaa gctgcagaaa | eggegegee ggeageegeg gaacgetgeg ggacegegag gegetgeaga tttgteeetg aagtgtgaga ttetgegaga caagagagea getetteaga catetgetgg gactgeaaag taeegggaag caegaagaca | gccgcgtgcg gcggtcgtcg gaccgcggcg aactcctctt ctaacccgcc aacaaggagg agtgccacct gctgcatggc tcgttaaaga tctattgtcg tgcatttaaa aaaaggtctt ccacatgcag ccgactgtcc | gctcttcccc gaggacgcgc tcctaaaatg gctaaagctg ttacaaggaa ggtgctgtgc ggccctgctg taaggtgttt gaatgaaagc aaatgattgc gaggaaagac ccactgcaag ctgcgtggtg | gcccccgtc ccggcgcccc gagtcgagta cacactgacc aagtttgtga agcccgaagc agctcttcaa aaggataatt agaggttgtg cattttgaag ctgcgagacc agtcaggttc gtgtcctgcc | atggggcagc tgagccggcc aaaagatgga gtagtgctgg agaccgtgga agaccgagtg gtccaaaatg gctgcaagag cagagcagtt aacttccatg acgtggagaa cgatgatcgc ctcacaagtg | 120 180 240 300 360 420 480 540 600 660 720 |
| 220 221 222 223 224 225 226 227 228 229 230 231 232 233 234 | | SEQUENCE: cgggggagcg tccagccggcagca gagcggcagc ctctcctggc gacgccagtt ggacaagtac tgggcaccgc tacagcgtgt agaaattctg aacgctggga tgtgcgtcct ggcgtgtaaa gctgcagaaa cagcgtccag | eggegegee ggeageegeg gaacgetgeg ggacegegag gegetgeaga tttgteeetg aagtgtgaga ttetgegaga caagagagea getetteaga gaetgeaaag taeegggaag taeegggaag caegaagaea acteteetga | gccgcgtgcg gcggtcgtcg gaccgcggcg aactcctctt ctaacccgcc aacaaggagg agtgccacct gctgcatggc tcgttaaaga tctattgtcg tgcatttaaa aaaaggtctt ccacatgcag ccgactgtcc ggagcgagtt | gctcttcccc gaggacgcgc tcctaaaatg gctaaagctg ttacaaggaa ggtgctgtgc ggccctgctg taaggtgttt gaatgaaagc aaatgattgc gaggaaagac ccactgcaag ctgcgtggtg gagtgcacac | gcccccgtc ccggcgccc gagtcgagta cacactgacc aagtttgtga agcccgaagc agctcttcaa aaggataatt agaggttgtg cattttgaag ctgcgagacc agtcaggttc gtgtcctgcc ttgtcagagt | atggggcagc tgagccggcc aaaagatgga gtagtgctgg agaccgtgga agaccgagtg gtccaaaatg gctgcaagag cagagcagtt aacttccatg acgtggagaa cgatgatcgc ctcacaagtg gtgtcaatgc | 120 180 240 300 360 420 480 540 600 660 720 780 840 900 |
| 220 221 222 223 224 225 226 227 228 229 230 231 232 233 234 235 | | SEQUENCE: cgggggagcg tccagccggcagca gagcggcagc ctctcctggc gacgccagtt ggacaagtac tgggcaccgc tacagcgtgt agaaattctg aacgctggga tgtgcgtcct ggcgtgtaaa gctgcagaaa cagcgtccag cccagcacc | eggegegeeeeggegeeggeeggegegegegegegege | gccgcgtgcg gcggtcgtcg gaccgcggcg aactcctctt ctaacccgcc aacaaggagg agtgccacct gctgcatggc tcgttaaaga tctattgtcg tgcatttaaa aaaaggtctt ccacatgcag ccgactgtcc ggagcgagtt agcgctatgg | gctcttcccc gaggacgcgc tcctaaaatg gctaaagctg ttacaaggaa ggtgctgtgc ggccctgctg taaggtgttt gaatgaaagc aaatgattgc gaggaaagac ccactgcaag ctgcgtggtg gagtgcacac ctgcgttttt | gcccccgtc ccggcgccc gagtcgagta cacactgacc aagtttgtga agcccgaagc agctcttcaa aaggataatt agaggttgtg cattttgaag ctgcgagacc agtcaggttc gtgtcctgcc ttgtcagagt caggggacaa | atggggcagc tgagccggcc aaaagatgga gtagtgctgg agaccgtgga agaccgagtg gtccaaaatg gctgcaagag cagagcagtt aacttccatg acgtggagaa cgatgatcgc ctcacaagtg gtgtcaatgc accagcagat | 120 180 240 300 360 420 480 540 600 720 780 840 900 960 |
| 220 221 222 223 224 225 226 227 228 229 230 231 232 233 234 235 236 | | SEQUENCE: cgggggagcg tccagccggcaccagcagcaccagttggacacgctacagcagttagacagctggaatgtgcgtcctggcgtgtaaacgctgcagaaacagcgtccagcaccaaggccaccaaggcccaccaggaccaccaggaccacc | eggcgcgccccccccccccccccccccccccccccccc | gccgcgtgcg gcggtcgtcg gaccgcggcg aactcctctt ctaacccgcc aacaaggagg agtgccacct gctgcatggc tcgttaaaga tctattgtcg tgcatttaaa aaaaggtctt ccacatgcag ccgactgtcc ggagcgagtt agcgctatgg ccgccgtgca | gctcttcccc gaggacgcgc tcctaaaatg gctaaagctg ttacaaggaa ggtgctgtgc ggccctgctg taaggtgttt gaatgaaagc aaatgattgc gaggaaagac ccactgcaag ctgcgtggtg gagtgcacac ctgcgttttt gcacgtcaac | gcccccgtc ccggcgccc gagtcgagta cacactgacc aagtttgtga agcccgaagc agctcttcaa aaggataatt agaggttgtg catttgaag ctgcgagacc agtcaggttc gtgtcctgcc ttgtcagagt caggggacaa ctgctgaagg | atggggcagc tgagccggcc aaaagatga gtagtgctgg agaccgtgga agaccgagtg gtccaaaatg gctgcaagag cagagcagtt aacttccatg acgtggagaa cgatgatcgc ctcacaagtg gtgtcaatgc accagcagat agtggagcaa | 120 180 240 300 360 420 480 540 600 720 780 840 900 960 1020 |
| 220 221 222 223 224 225 226 227 228 229 230 231 232 233 234 235 236 237 | | SEQUENCE: cgggggagcg tccagccggcaccagcaccagcagtt ggacaagtac tgggcaccgc tacagcgtgt agaaattctg aacgctggga tgtgcgtcat ggcgtgtaaa gctgcagaaa cagcgtccag cccagcacc ctcgctcga | cggcgcgcc ggcagccgcg gaacgctgcg ggaccgcgag gcgctgcaga tttgtccctg aagtgtgaga ttctgcgaga caagagagca gctcttcaga catctgctgg gactgcaaag taccgggaag cacgaagaca actctcctga tgtagtttta gaggccagct aagaaggttt | gccgcgtgcg gcggtcgtcg gaccgcggcg aactcctctt ctaacccgcc aacaaggagg agtgccacct gctgcatggc tcgttaaaga tctattgtcg tgcatttaaa aaaaggtctt ccacatgcag ccgactgtcc ggagcgagtt agcgctatgg ccgccgtgca ccttgttgca | gctcttcccc gaggacgcgc tcctaaaatg gctaaagctg ttacaaggaa ggtgctgtgc ggccctgctg taaggtgttt gaatgaaagc aaatgattgc gaggaaagac ccactgcaag ctgcgtggtg gagtgcacac ctgcgttttt gcacgtcaac gaatgaaagt | gcccccgtc ccggcgccc gagtcgagta cacactgacc aagtttgtga agcccgaagc agctcttcaa aaggataatt agaggttgtg catttgaag ctgcgagacc agtcaggttc gtgtcctgcc ttgtcagagt caggggacaa ctgctgaagg gtagaaaaaa | atggggcagc tgagccggcc aaaagatga gtagtgctgg agaccgtgga agaccgagtg gtccaaaatg gctgcaagag cagagcagtt aacttccatg acgtggagaa cgatgatcgc ctcacaagtg gtgtcaatgc accagcagat agtggagcaa agtggagcaa actagcagat | 120 180 240 300 360 420 480 540 600 720 780 840 900 960 1020 1080 |
| 220 221 222 223 224 225 226 227 228 229 230 231 232 233 234 235 236 237 238 | | SEQUENCE: cgggggagcg tccagccggc acgcgggagca ctctcctggc gacgccagtt ggacaagtac tgggcaccgc tacagcgtgt agaaattctg aacgctggga tgtgcgtcat ggcgtgtaaa gctgcagaaa cagcgtccag cccagcacc ctcgctcgaa acaaagtttg | eggegegeeeeggegeeggeeggegegegegegegege | gccgcgtgcg gcggtcgtcg gaccgcggcg aactcctctt ctaacccgcc aacaaggagg agtgccacct gctgcatggc tcgttaaaga tctattgtcg tgcatttaaa aaaaggtctt ccacatgcag ccgactgtcc ggagcgagtt agcgctatgg ccgccgtgca ccttgttgca tatgtagctt | gctcttcccc gaggacgcgc tcctaaaatg gctaaagctg ttacaaggaa ggtgctgtgc ggccctgctg taaggtgttt gaatgaaagc aaatgattgc gaggaaagac ccactgcaag ctgcgtggtg gagtgcacac ctgcgttttt gcacgtcaac gaatgaaagt tgaaattgaa | gcccccgtc ccggcgcccc gagtcgagta cacactgacc aagtttgtga agcccgaagc agctcttcaa aaggataatt agaggttgtg catttgaag ctgcgagacc agtcaggttc gtgtcctgcc ttgtcagagt caggggacaa ctgctgaagg gtagaaaaaa attgagagac | atggggcagc tgagccggcc aaaagatga gtagtgctgg agaccgtgga agaccgagtg gtccaaaatg gctgcaagag cagagcagtt aacttccatg acgtggagaa cgatgatcgc ctcacaagtg gtgtcaatgc accagcagat agtggagcaa acagagcaat agtggagcaa acaagagcat aacaagagcat | 120 180 240 300 360 420 480 540 600 720 780 840 900 960 1020 1080 1140 |
| 220 221 222 223 224 225 226 227 228 229 230 231 232 233 234 235 236 237 238 239 | | SEQUENCE: cgggggagcg tccagccggc ccggggagca gagcggcact tctcctggc gacgccagtt ggacaagtac tgggcaccgc tacagcgtgt agaaattctg aacgctggga tgtgcgtcat ggcgtgtaaa gctgcagaaa cagcgtccag cccagcacc ctcgctcgaa acaaagtttg gcttcgaaat | eggegegeeeeggegeeggeeggegegegegegegege | gccgcgtgcg gcggtcgtcg gaccgcggcg aactcctctt ctaacccgcc aacaaggagg agtgccacct gctgcatggc tcgttaaaga tctattgtcg tgcatttaaa aaaaggtctt ccacatgcag ccgactgtcc ggagcgagtt agcgctatgg ccgccgtgca ccttgttgca tatgtagctt aatccttca | gctcttcccc gaggacgcgc tcctaaaatg gctaaagctg ttacaaggaa ggtgctgtgc ggccctgctg taaggtgttt gaatgaaagc aaatgattgc gaggaaagac ccactgcaag ctgcgtggtg gagtgcacac ctgcgttttt gcacgtcaac gaatgaaagt tgaaattgaa ttgaaattgaa ttgaaattgaa | gcccccgtc ccggcgcccc gagtcgagta cacactgacc aagtttgtga agcccgaagc agctcttcaa aaggataatt agaggttgtg cattttgaag ctgcgagacc agtcaggttc gtgtcctgcc ttgtcagagt caggggacaa ctgctgaagg gtagaaaaaa attgagagac gtgatcgaca | atggggcagc tgagccggcc aaaagatga gtagtgctgg agaccgtgga agaccgagtg gtccaaaatg gctgcaagag cagagcagtt aacttccatg acgtggagaa cgatgatcgc ctcacaagtg gtgtcaatgc accagcagat agtggagcaa acaagagcat aaaaggaaat gccaagcaga | 120 180 240 300 360 420 480 540 600 720 780 840 900 960 1020 1080 1140 |
| 220 221 222 223 224 225 226 227 228 229 230 231 232 233 234 235 236 237 238 239 240 | | SEQUENCE: cgggggagcg tccagccggc acgcagcac ctctcctggc gacgccagtt ggacaagtac tgggcaccgc tacagcgtgt agaaattctg aacgctgcag acgcgtgtaaa gctgcagaaa cagcgtccag cccagcacc ctcgctcgaa acaaagtttg gcttcgaaat gaaactgaag | eggegegeeeeggeeeggeeggegegegegegegegeg | gccgcgtgcg gcggtcgtcg gaccgcggcg aactcctctt ctaacccgcc aacaaggagg agtgccacct gctgcatggc tcgttaaaga tctattgtcg tgcatttaaa aaaaggtctt ccacatgcag ccgactgtcc ggagcgagtt agcgctatgg ccgccgtgca ccttgttgca tatgtagctt aaatccttca aggagatccg | gctcttcccc gaggacgcgc tcctaaaatg gctaaagctg ttacaaggaa ggtgctgtgc ggccctgctg taaggtgttt gaatgaaagc aaatgattgc gaggaaagac ccactgcaag ctgcgtggtg gagtgcacac ctgcgttttt gcacgtcaac gaatgaaagt tgaaattgaa ttacagcga gcccttccgg | gcccccgtc ccggcgcccc gagtcgagta cacactgacc aagtttgtga agcccgaagc agctcttcaa aaggataatt agaggttgtg cattttgaag ctgcgagacc agtcaggttc gtgtcctgcc ttgtcagagt caggggacaa ctgctgaaagg gtagaaaaaa attgagagac gtgatcgaca cagaactggg | atggggcagc tgagccggcc aaaagatga gtagtgctgg agaccgtgga agaccgagtg gtccaaaatg gctgcaagag cagagcagtt aacttccatg acgtggagaa cgatgatcgc ctcacaagtg gtgtcaatgc accagcagat agtggagcaa acaagagcaa acaagagcaa aggaagcaga | 120 180 240 300 360 420 480 540 600 660 720 780 840 900 960 1020 1080 1140 1200 |
| 220 221 222 223 224 225 226 227 228 229 230 231 232 233 234 235 236 237 238 239 240 241 | | SEQUENCE: cgggggagcg tccagccggc acgcgggagca ctctcctggc gacgccagtt ggacaagtac tgggcaccgc tacagcgtgt agaaattctg aacgctgcag acgcgtgtaaa gctgcagaaa cagcgtccag cccaaggcccac ctcgctcgaa acaaagtttg gcttcgaaat gaaactgaag cagcatgaag cagcatgaag | eggegegeeeeggegeggeeeggegeggegeggeggegg | gccgcgtgcg gcggtcgtcg gaccgcggcg aactcctctt ctaacccgcc aacaaggagg agtgccacct gctgcatggc tcgttaaaga tctattgtcg tgcatttaaa aaaaggtctt ccacatgcag ccgactgtcc ggagcgagtt agcgctatgg ccgccgtgca ccttgttgca tatgtagctt aaatccttca aggagatccg agtccctcca | gctcttcccc gaggacgcgc tcctaaaatg gctaaagctg ttacaaggaa ggtgctgtgc ggccctgctg taaggtgttt gaatgaaagc aaatgattgc gaggaaagac ccactgcaag ctgcgtggtg gagtgcacac ctgcgttttt gcacgtcaac gcacgtcaac ttacagcga ttgaaattgaa tttacagcga geccttccgg gaaccgcgtg | gcccccgtc ccggcgcccc gagtcgagta cacactgacc aagtttgtga agcccgaagc agctcttcaa aaggataatt agaggttgtg cattttgaag ctgcgagacc agtcaggttc gtgtcctgcc ttgtcagagt caggggacaa ctgctgaagg gtagaaaaaa attgagagac gtgatcgaca cagaactggg accgagctgg | atggggcagc tgagccggcc aaaagatga gtagtgctgg agaccgtgga agaccgagtg gtccaaaatg gctgcaagag cagagcagtt aacttccatg acgtggagaa cgatgatcgc ctcacaagtg gtgtcaatgc accagcagat agtggagcaa acaagagcat agtggagcaa acaagagcat agaagcaga aggaagcaga aggaagcaga | 120 180 240 300 360 420 480 540 600 660 720 780 840 900 960 1020 1080 1140 1200 1260 1320 |
| 220 221 222 223 224 225 226 227 228 229 230 231 232 233 234 235 236 237 238 239 240 | | SEQUENCE: cgggggagcg tccagccggc ccggggagca gagcggcagc ctctcctggc gacgccagtt ggacaagtac tgggcaccgc tacagcgtgt agaaattctg aacgctggga tgtgcgtcct ggcgtgtaaa gctgcagaaa cagcgtccag cccagcacc ctcgctcgaa acaaagtttg gcttcgaaat gaaactgaag cagcatgaag cagagtgcg | eggegegeeeeggeeeggeeggegegegegegegegeg | gccgcgtgcg gcggtcgtcg gaccgcggcg aactcctctt ctaacccgcc aacaaggagg agtgccacct gctgcatggc tcgttaaaga tctattgtcg tgcatttaaa aaaaggtctt ccacatgcag ccgactgtcc ggagcgagtt agcgctatgg ccgccgtgca ccttgttgca tatgtagctt aatccttca aggagatccg agtccctcca ctcggaacac | gctcttcccc gaggacgcgc tcctaaaatg gctaaagctg ttacaaggaa ggtgctgtgc ggccctgctg taaggtgttt gaatgaaagc aaatgattgc gaggaaagac ccactgcaag ctgcgtggtg gagtgcacac ctgcgttttt gcacgtcaac gaatgaaagt tgaaattgaa ttacagcga gcccttccgg gaaccgcgtg aggcctgctg | gcccccgtc ccggcgcccc gagtcgagta cacactgacc aagtttgtga agcccgaagc agctcttcaa aaggataatt agaggttgtg cattttgaag ctgcgagacc agtcaggttc gtgtcctgcc ttgtcagagt caggggacaa ctgctgaagg gtagaaaaaa attgagagac gtgatcgaca cagaactggg accgagctgg gagtcccagc | atggggcagc tgagccggcc aaaagatga gtagtgctgg agaccgtgga agaccgagtg gtccaaaatg gctgcaagag cagagcagtt aacttccatg acgtggagaa cgatgatcgc ctcacaagtg gtgtcaatgc accagcagat agtggagcaa acaagagcat agtggagcaa acaagagcat aacaagagcaga agaagcaga aggaagcaga aggaagcaga | 120 180 240 300 360 420 480 540 600 660 720 780 840 900 960 1020 1080 1140 1200 |

VERIFICATION SUMMARY

DATE: 04/18/2003

PATENT APPLICATION: US/08/813,323C

TIME: 14:26:37